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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/601,138

06/20/2003

Floyd F. Markling

566.020

5944

27390

7590

04/04/2007

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EXAMINER

TRAN, HANH VAN

ART UNIT

PAPER NUMBER

3637

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/601,138	MARKLING ET AL.	
	Examiner	Art Unit	
	Hanh V. Tran	3637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-12,15-22,24-30,37 and 38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-12,15,16,18-22,24-30,37 and 38 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is a Non-Final Office action from the examiner in charge of this application in response to applicant's amendment filed on 1/4/2007.

Claim Objections

2. Claims 8 and 17 are objected to because of the following informalities: (1) claim 8, there is "7" at the end of the claim, (2) claim 17, line 1 "on" should be "one".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3-10, 24-25, and 37-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1, (1) the recitation "cyclical, planar undulations" is vague for failing to clearly define how it is possible for an undulation to be cyclical and planar at the same time, (2) the limitation of the undulations rise and fall "end-to-end as a continuous front over the span of each undulation parallel to first and second axes of the first and second bonding surfaces" is vague and indefinite for failing to clearly define the metes and bounds of the claimed invention; it is not clear what applicant is trying to claim here. Claim 24, "a plurality of undulating corrugations" is vague for failing to clearly define whether they are the same or different from the undulations recited in claim 1. Claim 28, it is not clear what applicant is trying to claim here; how to define the wave fronts such that they lie parallel

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to a first axis (which axis are we talking about here?), and the second axis. Claim 37, the recitation of "sinusoidal waves" is vague for failing to clearly define whether they are the same or different from the ones in claim 3.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3-10, 24-25, and 37-38 stand rejected under 35 U.S.C. 102(b) as being anticipated by USP 5,401,347 to Shuert.

Shuert discloses a thermoforming plastic pallet comprising all the elements recited in the above listed claims including, such as shown in Figs 10-19, a first portion 30 having a generally flat outer surface and an inner surface including a continuous plane of a plurality of undulating ridges and valleys disposed from the outer surface; a second portion 32 having an outer surface including a plurality of depending feet 36 and intervening channels, and an inner surface including a continuous plane of a plurality of undulating ridges and valleys displaced from the outer surface; wherein the undulating ridges and valleys of the inner surface of the second portion are molded in complementary shaped surfaces to interdigitates with and conformally mates with the undulating ridges and valleys of the first portion without any spaces in the regions of interdigitation, the outer surface of the second portion includes a plurality of undulating ridges and valleys which ridges being defined as the feet and the valleys being defined

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as the spaced between adjacent feet, the inner surfaces of the first and second portions each comprise a series of undulations, the undulations of the inner surfaces of said first and second portions span one dimension of said first and second portions and wherein each undulation includes a series of ridges and grooves that conformally mate with a series of ridges and grooves of a complementary undulation at the other of said first and second portions, wherein the undulations at the inner surfaces of the first and second portions respectively define first and second wave fronts relative to a first axis and wherein undulations at each of said first and second wave fronts include a plurality of undulation ridges and valleys of third and fourth wave fronts that respectively bisect the first axis by defining a first direction of the wave fronts as a first axis and a second direction of the wave fronts as a second axis, with the second axis being orthogonal to the first axis; wherein the inner surface of the second portion respectively provide first and second complementary shaped bonding surfaces, wherein the first and second bonding surfaces respectively comprise first and second areas each comprising a plurality of cyclical, planar undulations, wherein the planar undulations respectively rise and fall end-to-end as a continuous front over the span of each undulation parallel to first and second axes of the first and second bonding surfaces, and wherein the undulations of the second portion are displaced to interdigitate and conformally mate with the undulations of the first portion. In regard to the "whereby" clause, it has been held that the functional "whereby" statement does not define any structure and accordingly cannot serve to distinguish.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 11-12, 15-16, 18-22, and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shuert in view of USP 6,112,672 to Heil.

Shuert discloses a thermoforming plastic pallet comprising all the elements recited in the above listed claims including, such as shown in Figs 10-19, and as disclosed in paragraph # 6 above, a first portion 30 having a generally flat outer surface and an inner surface including a plurality of undulating ridges and valleys disposed from the outer surface; a second portion 32 having an outer surface including a plurality of depending feet 36 and intervening channels, and an inner surface including a plurality of undulating ridges and valleys displaced from the outer surface; wherein the undulating ridges and valleys of the inner surface of the second portion are molded in complementary interdigitation to the undulating ridges and valleys of the first portion, the outer surface of the second portion includes a plurality of undulating ridges and valleys which ridges being defined as the feet and the valleys being defined as the spaced

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between adjacent feet. The different being that Shuert fails to disclose the pallet being a blow-molded pallet, instead of a thermoforming pallet.

Heil teaches that it is well known in the art to make members of a plastic pallet by blow-molded plastic in order to provide a process of manufacture that is predictable and reproducible, thereby decreasing variance and operating costs. Therefore, it would have been obvious and well within the level of one skill in the art to have the plastic pallet of Shuert being made of blow-molding process in order to provide a process of manufacture that is predictable and reproducible, thereby decreasing variance and operating costs, as taught by Heil, since both teach alternate conventional plastic pallet structure, used for the same intended purpose, thereby providing structure as claimed.

Allowable Subject Matter

10. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments filed 1/4/2007 have been fully considered but they are not persuasive. In response to applicant's argument on page 11 Shuert's pallet is "replete with spaces and gaps that occur around and in between the rows of bosses. In contrast, Applicant's claimed undulating surfaces exhibit no spaces or gaps or flat non-undulating surfaces in the areas of conformal interdigitation", the examiner takes the position that Applicant is corrected in pointing out the spaces and gaps in Shuert; however, the claimed language does not appear to recited that the areas of conformal interdigitation

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occurs over the entire areas of the first and second portions without any spaces, gaps or flat between adjoining undulations of the mating first and second bonding surfaces. Although claim 1 does recited said language, it appears in the "whereby" clause, not "wherein".

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh V. Tran whose telephone number is (571) 272-6868. The examiner can normally be reached on Monday-Thursday, and alternate Friday.

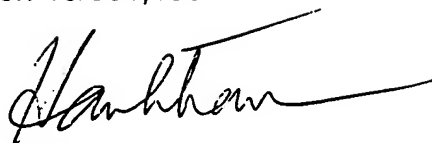
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read 'Hanh V. Tran', with a long horizontal flourish extending to the right.

HVT

Hanh V. Tran

April 1, 2007

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